

Claims

1. A method for reducing vibrations of at least two rotating components (01, 02, 23, 24), which roll off on each other, having at least one raised area (09) projecting from a substantially circular contour of an effective surface area (03, 04) on at least one of the rotating components, characterized in that a height (h09) of the raised area (09) in the radial direction, and/or a relative position of the raised area (09) in the circumferential direction, is changed as a function of a value (v, g, a1, a2, a3, a4, e(t)) which defines a printing press status and/or the vibration.

2. The method in accordance with claim 1, characterized in that the height (h09) and/or the relative position of the raised area (09) are controlled as a function of a roll-off speed.

3. The method in accordance with claim 1, characterized in that the height (h09) and/or the relative position of the raised area (09) are regulated as a function of an amplitude (a1, a2, a3, a4) detected on at least one of the components (01, 02, 23, 24).

4. The method in accordance with claim 1, characterized in that the height (h09) and/or the relative position of the raised area (09) are controlled as a function of an amplitude (a1, a2, a3, a4) detected on at least one of the components (01, 02, 23, 24).

5. The method in accordance with claim 1, characterized in that the change of the relative position of the raised area (09) in the circumferential direction takes place in respect to an effective distance (a09) from an interruption (06) on an effective surface area (03, 04) of at least one of the components (01, 02, 23, 24).

6. The method in accordance with claim 2, 3 or 4, characterized in that the control or regulation takes place by means of an interrelationship stored in a logical unit (18).

7. The method in accordance with claim 6, characterized in that the interrelationship is constituted by a dependence of a reference variable (h_{09SOLL} , P_{SOLL} , S_{SOLL} , U_{SOLL}) for the operating point of an actuator (11) from the roll-off speed (v).

8. The method in accordance with one or several of the preceding claims, characterized in that a reference variable (h_{09SOLL} , P_{SOLL} , S_{SOLL} , U_{SOLL}) for the operating point of an actuator (11) is varied on the basis of a stored interrelationship between a relative amplitude ($e(t)$) of the two components (01, 02, 23, 24) and a manipulated value (h_{09} , P, S, U) for operating the actuator (11).

9. A device for reducing vibrations of at least two rotating components (01, 02, 23, 24), which roll off on each other, having at least one raised area (09) projecting from a substantially circular contour of an effective surface area

(03, 04) on at least one of the rotating components, characterized in that means (11) are provided, with which a height (h09) of the raised area (09) in the radial direction, and/or a relative position of the raised area (09) in the circumferential direction, can be changed.

10. The device in accordance with claim 9, characterized in that a control system with a logical unit (08) is provided, by means of which the height (h09) of the raised area (09) and/or a distance (a09), which is defined in respect to a roll-off, between the raised area (09) and an interruption (06) on a surface area (03, 04) of one of the two components (01, 02, 23, 24), are controlled as a function of a value (v, g) defining the printing press state.

11. The device in accordance with claim 9, characterized in that a regulating device with a logical unit (08) is provided, by means of which the height (h09) of the raised area (09) and/or a distance (a09), which is defined in respect to a roll-off, between the raised area (09) and an interruption (06) on a surface area (03, 04) of one of the two components (01, 02, 23, 24), are regulated as a function of a value (a1, a2, a3, a4) defining the vibration.

12. The device in accordance with claim 9, characterized in that a control system with a logical unit (08) is provided, by means of which the height (h09) of the raised area (09) and/or a distance (a09), which is defined in respect to a roll-off, between the raised area (09) and an interruption (06) on a surface area (03, 04) of one of the

two components (01, 02, 23, 24), are controlled as a function of a value (a1, a2, a3, a4) defining the vibration.

13. The device in accordance with claim 9, characterized in that the raised area (09) is embodied as a type of a lip (09) in the area of the surface (03, 04) of a base body of the component (01, 02, 23, 24).

14. The device in accordance with claim 13, characterized in that the lip (09) substantially extends in the axial direction over the entire length (l01, l02) of a barrel of the component (01, 02, 23, 24).

15. The device in accordance with claim 13, characterized in that a ratio of a leg length (l09) of the lip (09) and a circumference (U) of the component (01, 02, 23, 24) lies between 0.02 and 0.04.

16. The device in accordance with claim 10, 11 or 12, characterized in that a ratio between the distance (a09) and a circumference (U) of the component (01, 02, 23, 24) lies between 0.002 and 0.02.

17. The device in accordance with claim 9, characterized in that the means (11) changing the height (h09) are designed as an actuator (11) which can be remotely controlled.

18. The device in accordance with claim 14, characterized in that the actuator (11) is designed as an actuator (11) driven by a pressure medium.

19. The device in accordance with claim 14, characterized in that the actuator (11) is designed as a reversibly deformable hollow body (11), which is arranged underneath the tongue/lip/bracket (09) in a groove (12) extending axially in the component (01, 02, 23, 24).

20. The device in accordance with claim 9, characterized in that only one of the two cooperating components (01, 02, 23, 24) has the at least one raised area (09).

21. The device in accordance with claim 9, characterized in that only one of the two cooperating components (01, 02, 23, 24) has the at least one interruption (06).

22. The device in accordance with claim 9, characterized in that at least one of the two cooperating components (01, 02, 23, 24) has an interruption (06), as well as a raised area (09).

23. The device in accordance with claim 9, characterized in that both components (01, 02, 23, 24) each have at least one interruption (06).

24. The device in accordance with claim 9, characterized in that both components (01, 02, 23, 24) each have at least one raised area (09).

25. The device in accordance with claim 9, characterized in that two of respectively four components (01, 02, 23, 24) acting together in pairs have an adjustable raised area (09).

26. The device in accordance with one or several of claims 20 to 25, characterized in that the component (01, 23) having the raised area (09) is embodied as a transfer cylinder (01, 23) of a printing group of a rotary printing press.

27. The device in accordance with claim 9, characterized in that the component (02, 24) having the raised area (09) is embodied as a forme cylinder (02, 24) of a printing group of a rotary printing press.

28. A rotating, vibration-damped component having at least one raised area (09) projecting out of a substantially circular contour of an effective surface area (03, 04), characterized in that a height (h09) of the raised area (09) in the radial direction, and/or a relative position of the raised area (09) in the circumferential direction are designed to be variable.

29. The component in accordance with claim 28, characterized in that a control system with a logical unit

(08) is provided, by means of which the height (h09) of the raised area (09) and/or a relative position of the raised area (09) in the circumferential direction are controlled as a function of a value (v, g) defining the printing press state.

30. The device in accordance with claim 28, characterized in that a regulating device with a logical unit (08) is provided, by means of which the height (h09) of the raised area (09) and/or a relative position of the raised area (09) in the circumferential direction are regulated as a function of a value (a1, a2, a3, a4) defining the vibration.

31. The component in accordance with claim 28, characterized in that the raised area (09) is designed as a type of tongue/lip/bracket (09) in the area of the surface of a base body of the component (01, 02, 23, 24).

32. The component in accordance with claim 31, characterized in that in the axial direction the tongue/lip/bracket (09) substantially extends over the entire length (l01, l02) of a barrel of the component (01, 02, 23, 24).

33. The component in accordance with claim 31, characterized in that a ratio of a leg length (l09) of the tongue/lip/bracket (09) and a circumference (U) of the component (01, 02, 23, 24) lies between 0.02 and 0.04.

34. The component in accordance with claim 28, characterized in that the means (11) for changing the height (h09) are designed as a remote-controlled actuator (11).

35. The component in accordance with claim 34, characterized in that the actuator (11) is designed as an actuator (11) driven by a pressure medium.

36. The component in accordance with claim 34, characterized in that the actuator (11) is designed as a reversibly deformable hollow body (11), which is arranged underneath the tongue/lip/bracket (09) in a groove (12) extending axially in the component (01, 02, 23, 24).

37. The component in accordance with claim 28, characterized in that the component (01, 02, 23, 24) has an interruption (06) on its effective surface area (03, 04).

38. The component in accordance with claim 37, characterized in that a ratio of a distance (a09) defined in relation to a roll-off between the raised area (09) and the interruption (06) and a circumference (U) of the component (01, 02, 23, 24) lies between 0.002 and 0.02.